

## AMENDMENTS TO THE CLAIMS:

Please cancel claims 1, 2, 3, and 16 without prejudice, add new claim 28, and amend claims 20 and 26 as follows:

Claims 1 to 4. (canceled)

5. (withdrawn) A read-and-write device for optical data transfer, said read-and-write device comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) that is greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ .

6. (withdrawn) The read-and-write device with a movable read-write head and at least one optical element, said at least one optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) is less than or equal to  $4.5 \text{ g/cm}^3$ .

Claims 7 to 16. (canceled)

17. (previously presented) An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35

and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ , wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	30 to 45
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{PbO}$	0.1 to 5
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{MgO}$	0 to 8
$\text{CaO}$	0 to 8
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 8
$\text{ZnO}$	1 to 10
$\text{TiO}_2$	0 to 5
$\text{ZrO}_2$	1 to 10
$\text{Y}_2\text{O}_3$	1 to 8
$\text{Yb}_2\text{O}_3$	0.1 to 2
$\text{Gd}_2\text{O}_3$	0.1 to 5
$\text{Nb}_2\text{O}_5$	0.1 to 10

with  $\text{MgO}+\text{CaO}+\text{SrO}+\text{BaO}$  0 to 10

with  $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$  0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

18. (previously presented) An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ , wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	35 to 50
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	0 to 8
$\text{GeO}_2$	0.5 to 15
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10

Cs <sub>2</sub> O	0 to 10
SrO	0 to 2
BaO	0.1 to 7
ZnO	0 to 5
ZrO <sub>2</sub>	0.1 to 8
Y <sub>2</sub> O <sub>3</sub>	0.1 to 6
Gd <sub>2</sub> O <sub>3</sub>	0 to 5
Nb <sub>2</sub> O <sub>5</sub>	1 to 10
With Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O+Rb <sub>2</sub> O+Cs <sub>2</sub> O	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of SO<sub>4</sub><sup>-2</sup>, Cl<sup>-</sup>, Sb<sub>2</sub>O<sub>3</sub>, As<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and CeO<sub>2</sub>.

19. (previously presented) An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to 4.5 g/cm<sup>3</sup>, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

La <sub>2</sub> O <sub>3</sub>	40 to 55
B <sub>2</sub> O <sub>3</sub>	22 to 32

$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	1 to 8
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 2
$\text{ZnO}$	0.5 to 6
$\text{TiO}_2$	0 to 1.0
$\text{ZrO}_2$	2 to 10
$\text{Y}_2\text{O}_3$	3 to 11
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

20. (currently amended). An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ , wherein said optical

glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which comprises:

$\text{La}_2\text{O}_3$	10 to 16
$\text{B}_2\text{O}_3$	1 to 8
$\text{Al}_2\text{O}_3$	0 to 3
$\text{SiO}_2$	20 to 30
$\text{Li}_2\text{O}$	0 to <u>[[10]] 1.5</u>
$\text{Na}_2\text{O}$	0 to <u>[[10]] 8</u>
$\text{K}_2\text{O}$	0 to <u>[[10]] 8</u>
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 8
$\text{ZnO}$	1 to 8
$\text{ZrO}_2$	0.5 to 6
$\text{TiO}_2$	3 to 11
$\text{Nb}_2\text{O}_5$	10 to 18
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

21. (withdrawn) The read-and-write device as defined in claim 5 or 6, wherein said density ( $\rho$ ) that is less than or equal to  $4.3 \text{ g/cm}^3$ .

22. (withdrawn) The read-and-write device as defined in claim 5 or 6, wherein a sample of said optical glass with a 25 mm thickness has a spectral transmission purity degree of at least percent 70.8 percent at a wavelength of 400 nm and a partial dispersion of no more than 0.567 in the blue spectral region.

23. (withdrawn) The read-and-write device as defined in claim 5 or 6, wherein said optical glass is a lanthanate borate glass, said lanthanate borate glass necessarily comprises  $\text{La}_2\text{O}_3$ ,  $\text{B}_2\text{O}_3$  and  $\text{ZrO}_2$  and said lanthanate borate glass includes either  $\text{Y}_2\text{O}_3$  or  $\text{Nb}_2\text{O}_5$ .

24. (withdrawn) The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	30 to 45
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{PbO}$	0.1 to 5
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10

Rb <sub>2</sub> O	0 to 10
Cs <sub>2</sub> O	0 to 10
MgO	0 to 8
CaO	0 to 8
SrO	0 to 8
BaO	0 to 8
ZnO	1 to 10
TiO <sub>2</sub>	0 to 5
ZrO <sub>2</sub>	1 to 10
Y <sub>2</sub> O <sub>3</sub>	1 to 8
Yb <sub>2</sub> O <sub>3</sub>	0.1 to 2
Gd <sub>2</sub> O <sub>3</sub>	0.1 to 5
Nb <sub>2</sub> O <sub>5</sub>	0.1 to 10
with MgO+CaO+SrO+BaO	0 to 10
with Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O+Rb <sub>2</sub> O+Cs <sub>2</sub> O	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of SO<sub>4</sub><sup>-2</sup>, Cl<sup>-</sup>, Sb<sub>2</sub>O<sub>3</sub>, As<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and CeO<sub>2</sub>.

25. (withdrawn) The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	35 to 50
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	0 to 8
$\text{GeO}_2$	0.5 to 15
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 2
$\text{BaO}$	0.1 to 7
$\text{ZnO}$	0 to 5
$\text{ZrO}_2$	0.1 to 8
$\text{Y}_2\text{O}_3$	0.1 to 6
$\text{Gd}_2\text{O}_3$	0 to 5
$\text{Nb}_2\text{O}_5$	1 to 10
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

26. (withdrawn – currently amended) The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

La <sub>2</sub> O <sub>3</sub>	40 to 55
B <sub>2</sub> O <sub>3</sub>	22 to 32
Al <sub>2</sub> O <sub>3</sub>	0 to 5
SiO <sub>2</sub>	1 to 8
Li <sub>2</sub> O	0 to 10
Na <sub>2</sub> O	0 to 10
K <sub>2</sub> O	0 to 10
Rb <sub>2</sub> O	0 to 10
Cs <sub>2</sub> O	0 to 10
SrO	0 to 8
BaO	0 to 2
ZnO	0.5 to 6
TiO <sub>2</sub>	0 to <u>[[3]] 1.0</u>
ZrO <sub>2</sub>	2 to 10
Y <sub>2</sub> O <sub>3</sub>	3 to 11
With Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O+Rb <sub>2</sub> O+Cs <sub>2</sub> O	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of SO<sub>4</sub><sup>-2</sup>, Cl<sup>-</sup>, Sb<sub>2</sub>O<sub>3</sub>, As<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and CeO<sub>2</sub>.

27. (withdrawn) The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	10 to 16
$\text{B}_2\text{O}_3$	1 to 8
$\text{Al}_2\text{O}_3$	0 to 3
$\text{SiO}_2$	20 to 30
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 8
$\text{ZnO}$	1 to 8
$\text{ZrO}_2$	0.5 to 6
$\text{TiO}_2$	3 to 11
$\text{Nb}_2\text{O}_5$	10 to 18
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,

Sb<sub>2</sub>O<sub>3</sub>, As<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and CeO<sub>2</sub>.

28. (new) An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to 4.5 g/cm<sup>3</sup>, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which comprises:

La <sub>2</sub> O <sub>3</sub>	10 to 16
B <sub>2</sub> O <sub>3</sub>	1 to 8
Al <sub>2</sub> O <sub>3</sub>	0 to 3
SiO <sub>2</sub>	20 to 30
Li <sub>2</sub> O	0 to 1.5
Na <sub>2</sub> O	0 to 8
K <sub>2</sub> O	0 to 8
Rb <sub>2</sub> O	0 to 10
Cs <sub>2</sub> O	0 to 10
CaO	17.8 to 30
SrO	0 to 8
BaO	0 to 8
ZnO	1 to 8
ZrO <sub>2</sub>	0.5 to 6

$\text{TiO}_2$	3 to 11
$\text{Nb}_2\text{O}_5$	10 to 18
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .